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FOLLOW-UP COMMENTARY ON TRAINING BEHAVIOR ANALYSTS

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I recommend that we decrease our ineffective efforts to train prominent researchers (Malott, 1992). So I am honored that three of our most prominent researchers have critically evaluated those recommendations (Baer, 1992; Johnston, 1992; Reid, 1992). One of those researchers leads the elite list of 26 scholars who authored at least five articles in the *Journal of Applied Behavior Analysis* (*JABA*) during its second decade. He published 16 articles! And he is not a college professor! Another of those researchers *is* a college professor and is responsible for having trained more of *JABA*'s authors than perhaps anyone else in the world.

However, among these critics I find no nonresearcher/author—no main-line behavior-analytic practitioner: the sort of professional I recommend we should be training more of. Whether this reflects editorial bias or the low frequency with which practitioners publish, the criticisms of my recommendations hardly come from a representative sample. Nonetheless, I am still honored that these three scholars were willing to respond, although often negatively.

Before addressing the individual critiques, I present one general clarification: I do not argue that there should be less high-quality research in applied behavior analysis. More would be fine. I do argue that we should stop training nearly all applied behavior analysts as if they were going to be researchers, when most will not.

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IN RESPONSE TO BAER (1992)

In Defense of the Status Quo?

Baer essentially supports the status quo. He argues, "If very many of the students whom we intended to train as researchers behave immediately after graduation as practitioners, then apparently we *are* training very many practitioners, whatever topography we may claim for that training" (p. 89). That reminds me of what physicians in Montevideo tell me about the practice of medicine there: The medical school trains more MDs than there are desirable positions to fill. Therefore, many MDs become taxi drivers. Does Baer's logic suggest the more appropriate name for the overly productive medical school should be the Uruguay National Medical School and Taxi Driver Institute? That trained researchers become practitioners does not mean they were trained to become practitioners. They became practitioners in spite of their training.

However, *if* the status quo were Don Baer, I would certainly join its defense. I know of no one who matches his rate of graduating high-quality researchers. In his case, I consider the effective practitioner/administrators he graduates as an added benefit, not as a justification for others adopting his practices.

Inculcating Proresearcher, Antipractitioner Values

Baer is right; I do not have much formal data. And he may not often tell his students they should become researchers. And he may be among the rare professors who do not find it especially reinforcing to clone themselves. Or he may define the clone more generally than most—perhaps successful clones are alumni who are properly data based in whatever endeavor they take on. But, despite what we professors say, we do train our graduate students in environments in which so much emphasis is placed on research that the winning professors are defined

as those with the most or best publications and the losers, including those who do not get tenure, are those with the fewest or worst publications. It is hard to imagine our graduate students successfully modeling their professors without acquiring those values to some extent. In other words, I take it as unexceptional that I heard a Kansas alumnus complain that the developmental disabilities center where he worked as a practitioner/administrator did not support research.

Student and Teacher: Conflicting Interests?

Baer believes that "Training programs are not nearly as effective in altering student behavior as students are in taking from them what they want" (p. 90). He almost seems to offer this as defense for teaching whatever that professor finds reinforcing or expedient to teach. What the professor tries to teach does not matter because hidden within the professor's course will be ample training for the student to do whatever the student ends up doing. Furthermore, the cunning and resourceful student will be able to extract that useful training from the mass of irrelevancies the course contains. Does this seem optimistic?

In Defense of Pseudoscience?

Baer seems to suggest that a quiet increase in the frequency of worthless correlation studies is evidence that many people know research training is irrelevant for practitioners, so they do easy pseudoscience dissertations. Why not do worthwhile behavioral systems analysis and interventions of the sort students need practice doing for their later careers? Of course such work might not help the advisors get tenure, a serious concern I do not demean.

I did not hope my recommendations would be "revolutionary" within any "communities of verbal behavior about graduate training" (p. 91). But I did hope my recommendation for a functional, job-based, goal-driven curriculum would be discriminated from a recommendation for more useless "functionally . . . commonplace" (p. 91) pseudoscientific research.

Can We Reliably Train Strategies?

I do not argue against the value of training our students to tell if something is "true or false" (p. 91). And I do not argue with Baer's observation that this "does not happen in many research-training programs" (p. 91). Also, I do not argue with Baer's suggestion that "if we understand a lot about the conditions under which we will say that something is true or false, we will reliably invent the necessary technique whenever we need it, if we do not already know it" (p. 91). But one of the most outstanding researchers in behavior analysis lamented that many students from his graduate course in truth and falsehood showed no evidence of ever having read Johnston and Pennypacker or Sidman at dissertation time. Perhaps he failed to teach "the logic of experimental control" (p. 91). However, my 25 years experience in teaching graduate students has been that it is depressingly hard for students to acquire general abstract strategies they can transfer across disparate problems. I have not quit; I still try. But my experience and the training literature suggest that the more specific and concrete the training, the more likely it will alter the student's repertoire in usable ways. Along the same lines, I see little evidence that most scholars, including behavior analysts, are much better judges of truth and falsity outside their own specialty areas than are taxi drivers, especially if the scholars have a vested interest.

Can We Justify the Status Quo?

Baer seems to suggest that no matter who we train and no matter what the market needs, everything will adjust appropriately. That seems a Panglossian justification for the status quo. Also, the absence of experimental data does not seem to be an adequate justification for our current expensive, restrictive status quo.

IN RESPONSE TO REID (1992)

Should We Try Harder to Produce Productive Practitioner/Researchers?

Reid agrees that we have a low rate of producing productive researchers; however, he suggests the

goal of producing productive practitioner/researchers justifies trying harder. Then these practitioner/researchers could tell the false from the true when they read nonrigorous applied literature. Our past failure in large-scale science training offers little support for this optimistic perspective. Wouldn't it be more cost effective for the Association for Behavior Analysis (ABA) to publish an annual review of the best and the worst from the literature outside *JABA*?

Instead of encouraging more *JABA*-type research, why not train behavior analysts to involve everyone in behavioral systems analyses and interventions? This would directly enhance the achievement of the agency's mission as well as produce the side benefits of enhancing service provision skills of the participants and increasing their general professional activities. In other words, I think we can accomplish Reid's objectives more cost effectively than by trying harder at continuing variations of the scientist/practitioner model.

Would It Suffice to Try Harder in Training Practitioner/Researchers?

If we could teach science more reliably, then it would be less wasteful to continue to try to do so. We should train our graduates to solve agency problems; that is the essence of behavioral systems analysis. But usually it will not be cost effective to solve the problem and also establish the truth about what intervention, if any, was responsible for the removal of the problem.

For those few graduates who will try to emulate Reid's model of productive publishing in an applied setting, his training program is exemplary: (a) train skills directly related to doing research in applied settings *where you live and get paid*; (b) have students do research internships in such settings with a master researcher (I recommend Reid); (c) have the faculty do sabbaticals in such settings with a master researcher (I recommend Reid). But the major problem is that there are not enough Reids to begin to meet the need (I recommend that students and faculty start queuing at Reid's door). In short, I agree that those faculty and departments with a fighting chance of success should try harder, but trying harder is not a practical solution for most graduate training programs. Furthermore, a plan to try harder is not an excuse for continuing the mediocre efforts of most faculty and departments at training would-be scientists or scientist/practitioners.

IN RESPONSE TO JOHNSTON (1992)

Data?

I agree with Johnston: We should do an analysis of the system. (a) What are we producing in what proportions (scientists, practitioners, BAs, MAs, PhDs)? (b) What needs to be produced? Furthermore, ABA might be the agency responsible to address these questions. We probably need much more emphasis on training BAs and MAs in applied behavior analysis, with coherent programs to do so. But I am less optimistic than Johnston is about the likelihood that data will have any significant control over our current institutional and professional behavior.

My impression is that Johnston's main concern with my recommendations is that I did not address all of the related issues he raised. True, I did not; but I do agree with essentially everything he said regarding those issues. My recommendation that we should all teach whatever we do best was only a compromise; I consider that a big improvement over most of us teaching what we do worst.

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